

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Currently Amended) A display device comprising:

a display panel having an electrooptic material layer on a substrate;

a driver integrated circuit mounted on an extended area of an edge of the substrate, said extended area provided in at least a margin of said display panel; and

~~wherein~~ a circuit board having electronic components thereon, [[is]] said electronic components being provided above said driver integrated circuit, said circuit board including one of a signal-output terminal portion and a scanning-output terminal portion positioned within said extended area and the other of said signal-output terminal portion and said scanning-output terminal portion extending outside said extended area, the circuit board connected to said driver integrated circuit.

2. (Currently Amended) A display device comprising:

a display panel having an electrooptic material layer sandwiched between a pair of substrates disposed opposite to each other;

a driver integrated circuit mounted on an extended area of said display panel in which an edge of one of the substrates extends further than an edge of the other substrate, said extended area provided in at least a margin of said display panel; and

~~wherein~~ a control circuit board having electronic components thereon, said electronic components being provided above said driver integrated circuit, ~~is and~~ said control circuit board connected to an input terminal portion of said driver integrated circuit, said control circuit board includes a signal-output terminal portion and a scanning-output terminal portion;

wherein one of said signal-output terminal portion and said scanning-output terminal portion is contained within said extended area and the other of said signal-output terminal portion and said scanning-output terminal portion extends outside of said extended area.

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3. (Currently Amended) A display device comprising:
- a display panel including:
 - a first and a second substrate opposed to each other;
 - an electrooptic material layer provided between the first and second substrates;
 - a first extended area provided in one of adjacent margins of said display panel;
 - a second extended area provided in the other margin;
 - scanning electrodes formed on a surface of the first substrate which is opposed to the second substrate;
 - data-signal electrodes formed on a surface of the second substrate which is opposed to the first substrate;

a scanning driver integrated circuit connected to said scanning electrodes which is mounted on the first extended area, in which the first substrate extends further than an edge of the second substrate; and

a data-signal driver integrated circuit connected to said data-signal electrodes which is mounted on the second extended area, in which the second substrate extends further than an edge of the first substrate; and

a control circuit board having electronic components thereon, said electronic components being provided at least above said scanning driver integrated circuit mounted in said first extended area or said data-signal driver integrated circuit mounted in said second extended area, said control circuit board including a signal-output terminal portion and a scanning-output terminal portion;

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wherein one of said signal-output terminal portion and said scanning-output terminal portion is contained within a plane region of one of the first and second extended areas and the other of said signal-output terminal portion and said scanning-output terminal portion extends outside of the one extended area to the other extended area, and an input terminal portion of said scanning driver integrated circuit mounted in said first extended area is connected to said scanning-output terminal portion and an input terminal portion of said data-signal driver integrated circuit mounted in said second extended area is connected to said signal-output terminal portion of said control circuit board.

4. (Previously Presented) A display panel according to Claim 2, wherein the input terminal portion of said driver integrated circuit above which said circuit board is mounted is connected to an end of an input wiring portion formed on said extended area in which said driver integrated circuit is mounted, and another end of the input wiring portion is extended to a vicinity of a shorter side of said extended area and is connected to said circuit board.

5. (Previously Presented) A display device according to Claim 1, wherein said circuit board further comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components provided for controlling a driving of said display panel.


6. (Previously Presented) A display device according to Claim 3, wherein said other of said signal-output terminal portion and said scanning-output terminal portion connects to an end of an input wiring portion formed close to a shorter side of the other of said extended areas.

7. (Previously Presented) A display device according to Claim 2, wherein said circuit board has a multilayer structure having an insulating layer interposed between a plurality of wiring layers in which predetermined upper and lower wiring layers are connected via a through hole.

8. (Previously Presented) A display device according to Claim 5, wherein said circuit board includes a flexible input wiring portion.

9. (Original) A display device according to Claim 2, wherein said electrooptic material layer is a liquid-crystal layer.

10. (Original) A display device according to Claim 1, wherein said electrooptic material layer is an electroluminescent light-emitting layer including an electroluminescent material.

 11. (Currently Amended) An electronic apparatus comprising:
a display device provided with a display panel having an electrooptic material on a substrate;

a driver integrated circuit mounted on an extended area of an edge of the substrate, said extended area provided in at least a margin of said display panel;

~~wherein~~ a circuit board having electronic components thereon, [[is]] said electronic components being provided above said driver integrated circuit proximate said extended area, the circuit board including one of a signal-output terminal portion and a scanning-output terminal portion being connected to said driver integrated circuit and contained within said extended area while the other of the signal-output terminal portion and the scanning-output terminal portion extends outside the extended area; and

an input unit for inputting a signal to said display device;

wherein said display device is accommodated in a casing.

12. (Currently Amended) An electronic apparatus comprising:

a display device having a display panel including:

a first and a second substrate opposed to each other;

an electrooptic material layer provided between the first and second substrates;

a first extended area provided in one of two adjacent margins of said display panel wherein the first substrate extends further than an edge of the second substrate;

a second extended area provided in the other of the two adjacent margins wherein the second substrate extends further than an edge of the first substrate;

scanning electrodes formed on a surface of the first substrate opposed to the second substrate;

data-signal electrodes formed on a surface of the second substrate opposed to the first substrate;

a scanning driver integrated circuit connected to said scanning electrodes mounted on the first extended area; and

a data-signal driver integrated circuit connected to said data-signal electrodes which is mounted on the second extended area; and

a circuit board having electronic components thereon, said electronic components being provided at least above said scanning driver integrated circuit mounted in said first extended area or said data-signal driver integrated circuit mounted

in said second extended area, said circuit board including one of a signal-output terminal portion and a scanning-output terminal portion positioned within a plane region of one of the first and second extended areas while the other of the signal-output terminal portion and the scanning-output terminal portion extends outside the other of the first and second extended areas; and

an input terminal portion of said scanning driver integrated circuit mounted in said first extended area is connected to said scanning-output terminal portion and an input terminal portion of said data-signal driver integrated circuit mounted in said second extended area is connected to said signal-output terminal portion of said circuit board; and

an input unit for inputting a signal to said display device;

wherein said display device is accommodated in a casing.

13. (Previously Presented) An electronic apparatus according to Claim 11, wherein the input terminal portion of said driver integrated circuit above which said circuit board is mounted is connected to an end of an input wiring portion formed on said extended area in which said driver integrated circuit is mounted, and another end of the input wiring portion is extended to a vicinity of a shorter side of said extended area and is connected to said circuit board.

14. (Previously Presented) An electronic apparatus according to Claim 11, wherein said circuit board further comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components mounted thereon for controlling a

driving of said display panel.

15. (Previously Presented) An electronic apparatus according to Claim 12, wherein said other of said signal-output terminal portion and said scanning-output terminal portion connects to an end of an input wiring portion formed close to a shorter side of the other said extended area which is adjacent to said one of the extended areas.

16. (Previously Presented) An electronic apparatus according to Claim 11, wherein said circuit board has a multilayer structure having an insulating layer interposed between a plurality of wiring layers in which predetermined upper and lower wiring layers are connected by a through hole.

17. (Previously Presented) An electronic apparatus according to Claim 14, wherein said circuit board includes a flexible input wiring portion.

18. (Previously Presented) An electronic apparatus according to Claim 11, wherein said electrooptic material layer further comprises a liquid-crystal layer.

19. (Previously Presented) An electronic apparatus according to Claim 11, wherein said electrooptic material layer further comprises an electroluminescent light-emitting layer including an electroluminescent material.

20. (Previously Presented) An electronic apparatus according to Claim 11,

wherein the circuit board of said display device includes a flexible input wiring portion for establishing connection to said input unit.

21. (Previously Presented) A display device according to Claim 2, wherein said circuit board further comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components provided for controlling a driving of said display panel.

22. (Previously Presented) A display device according to Claim 3, wherein said circuit board further comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components provided for controlling a driving of said display panel.

23. (Previously Presented) A display device according to Claim 3, wherein said circuit board has a multilayer structure having an insulating layer interposed between a plurality of wiring layers in which predetermined upper and lower wiring layers are connected via a through hole.

24. (Previously Presented) A display device according to Claim 6, wherein said circuit board includes a flexible input wiring portion.

25. (Previously Presented) A display device according to Claim 7, wherein said circuit board includes a flexible input wiring portion.

26. (Previously Presented) A display device according to Claim 3, wherein said electrooptic material layer further comprises an electroluminescent light-emitting layer including an electroluminescent material.

27. (Previously Presented) An electronic apparatus according to Claim 12, wherein said circuit board further comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components mounted thereon for controlling a driving of said display panel.

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27. (Previously Presented) An electronic apparatus according to Claim 12, wherein said circuit board comprises a circuit-wiring pattern formed on a flexible insulating-resin substrate and electronic components mounted thereon for controlling a driving of said display panel.

28. (Previously Presented) An electronic apparatus according to Claim 12, wherein said circuit board has a multilayer structure having an insulating layer interposed between a plurality of wiring layers in which predetermined upper and lower wiring layers are connected by a through hole.

29. (Previously Presented) An electronic apparatus according to Claim 15, wherein said circuit board includes a flexible input wiring portion.

30. (Original) An electronic apparatus according to Claim 12, wherein said electrooptic material layer is a liquid-crystal layer.

31. (Previously Presented) An electronic apparatus according to Claim 12, wherein the circuit board of said display device includes a flexible input wiring portion for establishing connection to said input unit.

32. (Previously Presented) A display device according to claim 1 wherein:
said extend area is substantially rectangular including a pair of long sides spaced apart by a pair of short sides; and
said other of said signal-output terminal portion and said scanning-output terminal portion extends across one of said short sides.

33. (Previously Presented) A display device according to claim 2 further comprising:
a second extended area where an edge of the other the substrates extends further than an edge of the one substrate, said second extended area provided in at least a margin of said display panel;
wherein said other of said signal-output terminal portion and said scanning-output terminal portion extends to said second extended area.

34. (Currently Amended) A display device comprising:
a display panel having an electrooptical material layer on a substrate;

a driver integrated circuit mounted directly on an extended area of an edge of the substrate, said extended area provided in at least a margin of said display panel; and

~~wherein~~ a circuit board having electronic components thereon, said electronic components being ~~[[is]]~~ provided above said driver integrated circuit and substantially within said extended area, the circuit board connected to said driver integrated circuit.

35. (New) A display device comprising:

a display panel having an electrooptic material layer on a substrate;

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a driver integrated circuit mounted on an extended area of an edge of the substrate, said extended area provided in at least a margin of said display panel; and

a circuit board having electronic components thereon, said electronic components being provided above said driver integrated circuit in an overlapped condition with the driver integrated circuit, said circuit board including one of a signal-output terminal portion and a scanning-output terminal portion positioned within said extended area and the other of said signal-output terminal portion and said scanning-output terminal portion extending outside said extended area, the circuit board connected to said driver integrated circuit.
